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ABSTRACT

An overview of basic information needed for exercising educational leadership is provided in this handbook. The first section reviews demographic influences, economic influences, social and political forces, and what all of these influences mean for policy makers. The optimum conditions under which students learn are discussed in the second section. Characteristics of good teachers and good schools are listed in the third section. The fourth section describes six areas in which recent major reports have indicated a need for reform: educational goals, cooperation among institutions and agencies, access to knowledge, the formal curriculum, the hidden curriculum, and student achievement. The fifth section focuses on the nature of schools as developing organisms and on methods that schools can use to enhance and direct their development. Methods that states and districts can employ to help schools improve are examined in the sixth section. Publications produced by the Education Commission of the States on teachers and teaching, school improvement, educational excellence, student achievement, law and education, school finance, governance, higher education, and other topics are listed in the seventh section. Appendixes present statistics on educational costs and enrollments. (PGD)

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EDUCATION ADVISORY

1986

FOR PEOPLE WHO CARE ABOUT ELEMENTARY/SECONDARY EDUCATION

Rexford Brown

Education Commission of the States

EA 018 670

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EDUCATION ADVISORY 1985

FOR PEOPLE WHO CARE ABOUT ELEMENTARY / SECONDARY EDUCATION

Rexford Brown

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December 1984

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INTRODUCTION

"Without strong champions, education will be eclipsed. . . ."

Nothing is more important to the future of this country than a vibrant, equitable and resilient education system. And nothing is more needed to sustain such a system than enthusiastic and informed leadership. Yet, as important as education is to our country, it is nevertheless only one of many vital concerns competing for public attention and resources. Without strong champions, education will be eclipsed or will receive less than its due at a time when we cannot afford to slacken our commitment.

It is with the critical need for informed, sustained leadership in mind that we offer this handbook. Its purpose is threefold.

- *First, to provide a short, readable synthesis of what we know about the basics of education — how students learn, how good teachers teach, how good schools become and remain good and how poorer schools can change and improve. Anyone charged with responsibility for education decisions should know these basics, for they define what it is we are all trying to achieve.*

- *Second, we want to sketch the environment within which education decisions will be made over the coming five years. Although we cannot know the details of the future, especially for every state or community, we do know what forces will shape education and influence our policies and decisions. Clearly, the future will require imaginative and resourceful leaders.*

- *Last, we offer this handbook as a reference source for speeches, papers and general information about education. Not only does it contain a great many facts and figures, it lists further sources of information for readers who want to explore particular problems and issues in greater depth.*

I expect that you will find this booklet useful. I hope that as we all use it in our different ways and contexts, we will be reminded of how many ideals we share in spite of our diversity. Congratulations on having assumed responsibility for some important elements of education in America and best wishes for a productive and gratifying term of service.

Charles S. Robb
Governor of Virginia
1984–85 Chair
Education Commission of the States

1. A CONTEXT FOR MAKING DECISIONS ABOUT EDUCATION

"Most decisions are reactive. . ."

Many factors must be considered to make an educated guess about the future of education. Trends in our economy and population, and in social, political and cultural circumstances will shape the ways we think about education and the problems we will have to solve.

Such factors as single-parent families, the growing minority population and fluctuations in those who graduate and those who drop out are important concerns for the future. Economic considerations such as job availability, training and retraining, and computer technology must be addressed. And, of course, the school's role in students' personal, social, academic and vocational development will change along with society and the economy.

Education as we know it is rapidly changing. Policy makers must be willing to address such problems as managing short- and long-term changes, dealing with population and enrollment changes and delivering appropriate educational experiences with economy and efficiency.

Although education is very important to all of us, it does not exist independently of many other important concerns and it is subject to powerful shaping forces. Policy decisions about education are made in the context of other matters competing for resources and in anticipation of, or response to, such influences as the economy, population trends or social, political and cultural circumstances.

Most decisions are reactive: we react to a teacher shortage or a baby boom or campus unrest or a state fiscal shortfall. Some decisions rest upon modest short-term projections about a school district's eroding tax base or the probable consequences of a new state spending cap or a court decision about educational opportunity. Rarely are decisions made on the basis of information about the long term — 5, 10 or more years down the line. This is so for two very good reasons.

- First, major decisions about schools, districts or state education systems are largely political, and politics tends to involve the immediate, the concrete and the expedient course of action. "We'll cross that bridge when we get to it," most people quite sensibly tell themselves.

- Second, the future is full of surprises and we have all learned that prophets of doom or salvation are not always right. Commercially successful claims to the contrary, there really are no trustworthy crystal balls. Few of us are willing to risk millions of dollars and millions of children on the claims of the latest futurist to make the talk-show rounds.

Nevertheless, we have to make educated guesses about the future, if only because education itself is so future-dependent: when we put a child in kindergarten, we assume that what she learns there and in successive years will prove useful in a world 12, 16 or 20 years into the future.

What follows is a synthesis of educated guesses about the forces most likely to influence education decision making over the next decade. Some must be taken with the usual grain of salt. We present all of them, however, with three purposes in mind.

- First, each may, indeed, have a significant impact upon education in some particular community or state, if not across the nation, so readers should ask themselves to what degree each is an appropriate concern.

- Second, the exercise of considering potential influences and placing education concerns in many different interpretive contexts is itself beneficial, regardless of whether particular trends hold up or wash out over the years. Strategic thinking is a good habit to get into, as long as you don't get so carried away by the abstractions that you lose touch with common sense and everyday experience.

- Third, discussions of possibilities inevitably bring people to consider ways of doing things in a new light. Conversations about possibility remind us that anything is possible, anything is changeable, anything can be improved.

DEMOGRAPHIC INFLUENCES

- Enrollments in public elementary schools will increase gradually during the late 1980s as the 5- to 17-year-old population rises from 44 million to almost 52.3 million in the year 2000.

- Demands for public and private preschool services will continue to rise, as will concerns about their value and accountability. One demographer forecasts a 12% boost in enrollment in grades 1–8 between 1985 and 1990: many of these children will need preschool services almost immediately.

- Both of the above trends will vary markedly from state to state, due to migration patterns, average population age and so on. Best overall guesses are that Northeastern and North-central states will continue to lose populations while Southern, Sun Belt and Western states will grow. Among states and even within states, some schools will be closing while others are opening or dealing with overcrowding.

SCHOOL ENROLLMENT TRENDS, 1970

● Marked Decline
○ Stable to Declining
● Growing

PROJECTIONS, 1985–2000

○ Stable to Declining
● Growth

Source: Joel Sherman, National Institute of Education.

- The school enrollment in 23 of the 25 largest cities in America is 70% minority students; by the end of the decade, large-city schools will be serving minority young people almost exclusively. More than a third of them will be non-English-speaking students requiring special treatment, and many of them will bring the problems associated with poverty and disadvantage into the classroom. A majority of the students in all California elementary schools now come from minority populations; almost half the students in Texas public schools are minorities. These proportions will grow. If these students do not receive a quality education and move into decent jobs, they will put such a strain on state treasuries that more and more relatively well-off citizens will be unable to live the lives they hope to live. The majority population thus has a strong financial incentive to ensure quality education for minorities.

- More than half of all children will now live part of their lives with a single parent before they are 18. The figure today is 14 million, and it will grow.

- Two-and-a-half million children now live in "blended families," i.e., they have step-parents, step-brothers and sisters, etc.

- About 7 million children return from school each day to an empty home. By 1995, it is estimated, there may be as many as 20 million of these "latchkey" children.

- About 73% of children born in a given year graduate from high school, and another 10% receive high school equivalency certificates before the age of 24. Over the next decade, even larger proportions of students will earn equivalency credentials instead of diplomas. Students with diplomas represent a net gain for the state because they will most likely work and pay taxes. Young people without diplomas represent a net loss to the state as they absorb more state money than they return. Thus, even slight fluctuations of the dropout rate affect a state's or community's net "wealth."

For more facts and figures, see the appendix.

ECONOMIC INFLUENCES

Who can say what the economy will do over the next decade? We know that recessions reduce the amount of money available for addressing educational problems. If a reduction in available money coincides with an increase in the number of students needing costly services in a large urban district, the result can be disastrous — for the students, the city and the various state and local agencies attempting to deal with welfare, crime and health problems. If businesses leave a particular community and the tax base supporting public schools shrinks or rests disproportionately upon certain groups, the state will have to step in and help.

Policy makers do not need encouragement to think about money. If anything, they need encouragement to focus less exclusively on immediate fiscal matters and turn attention to broader economic concerns. For instance:

- We will have 21 million new jobs by 1990. Many of these new jobs may carry an old title, but the tasks associated with them will be very different and probably more sophisticated. Fewer than a million will be strictly "high tech" jobs. A majority of the remaining jobs will be low-paying, low-prestige jobs involving fast foods, sales, health care and various service occupations. Many high school and college graduates are already "overskilled" for their jobs. Their numbers will rise as "credentials inflation" and technology combine to place more and more people in jobs for which they are too intelligent and imaginative.

- We need to retrain the work force. Simultaneous with an overtraining problem may be retraining problems. Old jobs are either going to change or disappear. In each case, workers will have to be retrained. What kind of education best prepares people for this? What kind of education system is best suited for retraining? What proportion of the investment should be public and what proportion private?

INTENDED AREA OF STUDY TRENDS, 1977–84

Increasing in Interest	Decreasing in Interest	Trend Not Clear
Business and Commerce	Agriculture	Engineering
Communications	Architecture/Environmental Design	Health & Medical
Computer Science	Art	Military Science
	Biological Sciences	Psychology
	Education	Social Sciences
	English & Literature	
	Foreign Languages	
	Forestry/Conservation	
	Geography	
	History & Cultures	
	Home Economics	
	Library Science	
	Mathematics	
	Music	
	Philosophy & Religion	
	Physical Sciences	
	Theater Arts	
	Trade & Vocational	

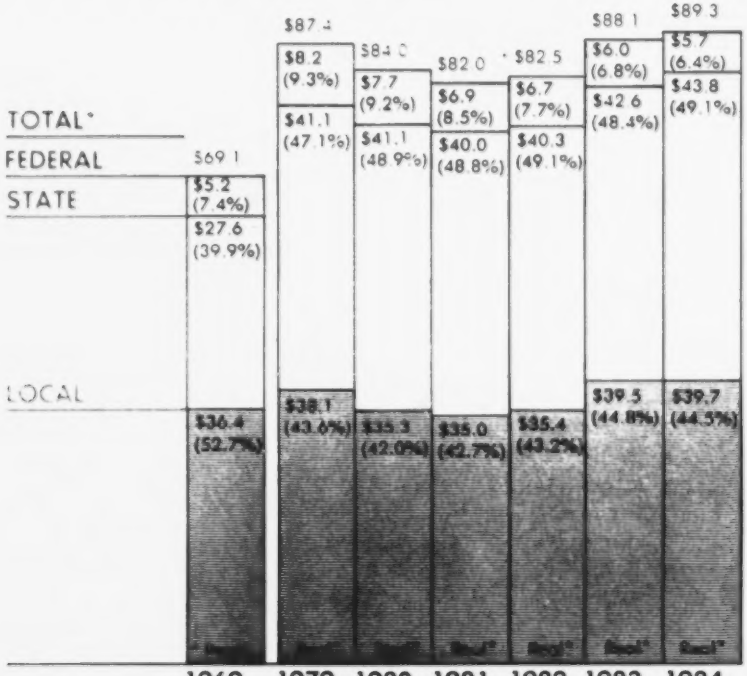
Source: College Board, *National College-Bound Seniors, 1984.*

- We need to use technology more intelligently. Numerous and sometimes contradictory predictions revolve around the economic impact of the microcomputer. The hourly costs per child for microcomputer instruction and teacher instruction are now roughly equal. Some suggest this will lead to more efficient distributions of labor in the schools and enable schools to be more productive for the same amount of money. Others suggest that computers add more to the cost of education than they contribute in productivity and that the schools are investing in the wrong equipment — both hardware and software — at the wrong time. If the economies are there, private sector education probably will flourish in the 80s and 90s. Entrepreneurs may harness the potential of microcomputers, videodisc technology and telecommunications to bring the best knowledge and instruction in the country to anyone's television screen or storefront learning center. Public education, then forced to compete for customers in an open economic market, will change in countless ways.

Decisions about education over the next few years will probably be made in an environment in which state aid for schools will grow modestly, at best. Federal aid to state and local governments is expected to decrease in real dollars over the next few years. The high federal deficit will continue to keep real interest rates high and retard investment until the deficit is brought under control.

REAL REVENUES FOR PUBLIC SCHOOLS FROM LOCAL, STATE AND FEDERAL GOVERNMENTS, 1969–84

SOURCES OF REVENUE (BILLIONS)
(%) PERCENTAGE OF TOTAL REVENUES

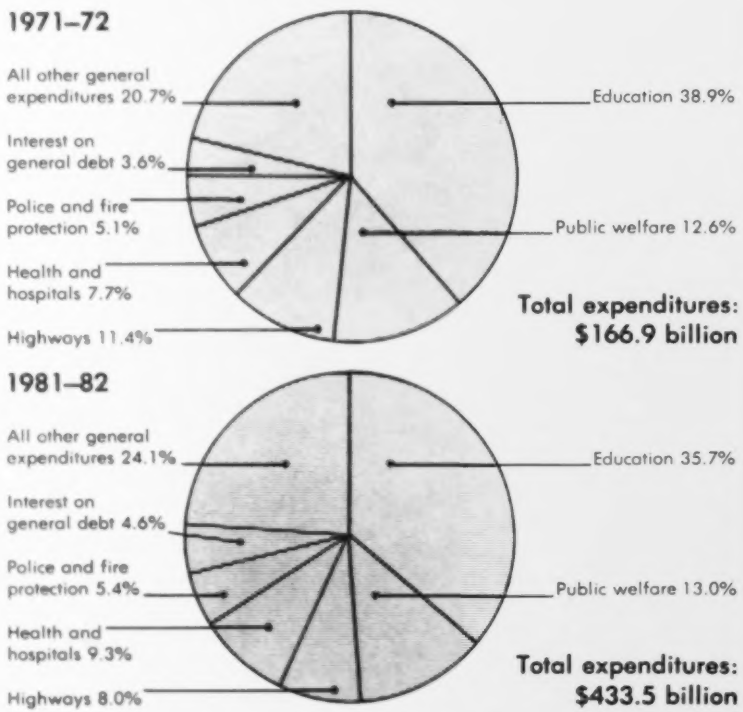


*Relative to 1979

Sources are *Education Finance in the States: 1984* (ECS) and the National Education Association, *Estimates of School Statistics, 1983–84.*
*Numbers may not total exactly because of rounding error.

To respond to increasing needs — for both education and other state priorities — in 1983, three-fourths of the states raised some taxes. In 1984 the trend slowed down, probably because it was an election year. States will probably wait to find out what the federal government will do about taxes before making further moves either to raise or to cut taxes. "With state finances still relatively healthy and enthusiasm for education reform still strong, 1985 may be the last, best chance for big increases in school aid for some time," says Steven Gold of the National Conference of State Legislatures. "The window of opportunity may close in many states in 1985."

EXPENDITURES OF STATE AND LOCAL GOVERNMENTS, 1971–72 AND 1981–82



Note: Because of rounding, percents may not add to 100.
Source: U.S. Department of Commerce, Bureau of the Census, *Governmental Finances, 1981–1982.*

SOCIAL AND POLITICAL FORCES

American education is deeply influenced by the same ideological conflicts that have enriched and complicated our national history. Education does not take place in a vacuum; schools must reflect and promote the values and ideas each generation wishes to pass along to the next. Just as there are conservative and progressive traditions in politics, there are conservative and progressive traditions in education. Sometimes one tradition is ascendant, sometimes the other, either across the country or in particular schools and districts. Usually, both are present in some kind of compromise or creative tension.

The conservative and progressive traditions differ with respect to the responsibilities each would accord the state in its education of children. In most of its forms, the conservative tradition would limit the responsibilities of the state to those educational activities and subjects of instruction that bear directly on the state's need for informed and productive citizens. Today, those subjects probably would be identified as reading, writing, arithmetic and science. They would leave all other aspects of education up to parents, the church and the community. From this point of view, the schools should impart certain basic kinds of knowledge and allow other, more important institutions to help students shape that knowledge in harmony with values developed beyond the influence of the state. Education would address **some** of the child's needs, as unobtrusively as possible, to meet the basic needs of the state.

The progressive tradition charges the state with responsibility for the **whole** child and focuses more upon the child's needs than the state's. The assumption is that the state is best served if it fosters the full development of each individual to his or her maximum potential. Secondary assumptions are that the state knows best how to do this, and that institutions such as church and family are not serving a significant portion of the population. The school must do it all. All, for the progressive, might include health and sex education, the fine arts, foreign languages, social skills and vocational training.

Over the years, ingenious combinations of both traditions have obscured the pure forms and each tradition has guarded against the excesses of the other. Nevertheless, policy is shaped by people with conservative or progressive leanings and education is periodically swept in one direction or the other. It is clear that the Reagan Administration reflects a more conservative educational philosophy than the previous one. This has affected the relative influence of federal, state and local governments on education, the relative amounts of money available for various programs, the kinds of educational reform measures being proposed in state legislatures and even the educational research agenda.

Americans will always argue about these basic differences and the role of the schools in shaping the personal, social, academic and vocational futures of young people. Polls indicate that most of us want the school to play **some** role in students' personal, social, academic and vocational development; but **which** roles, **what relative emphases** on each dimension and **how** to do it must be negotiated school by school, district by district, year after year.

Although explicit conflicts about the purpose and conduct of public education may be the most obvious sociopolitical influences on education decisions, they are by no means the only sociopolitical influences. Perhaps equally powerful influences include ideological conflicts leading to censorship of school materials, conflicts over national policy (e.g., the Vietnam War or the nuclear freeze) or the "religious awakenings" to which America periodically has been prone. All of these things create the context within which both momentous and trivial decisions must be made.

WHAT THESE INFLUENCES MEAN FOR POLICY MAKERS

Brief as they are, the foregoing comments establish that education as we know it is changing rapidly. Policies for dealing with that change will be heavily influenced by factors lying outside any one decision-maker's expertise or sphere of influence. Already a collaborative enterprise by institutional design, education will have to become even more collaborative by a conscious choice of each major actor. In deliberations about a school, a district or an entire state system, the primary actors are going to have to begin with the following questions:

- Do we have a rational process for predicting likely short- and long-term changes? Do we have a process for managing or adjusting to change?
- What are the population, migration and enrollment trends for our area? Is there a plan for dealing with them?
- What kinds of educational experiences are most appropriate for the kinds of students we can expect over the next decade? Do we know how best to deliver them? Will we have the money to deliver them in the best form?

Information about likely short- and long-term changes in your area is available at many universities, legislative research bureaus and governors' offices. You may have to develop a system for collecting and interpreting the information regularly.

To get a sense of some of the social trends likely to influence the context of education decisions, read ***New Rules*** by Daniel Yankelovitch (Random, 1977), ***Megatrends*** by John Naisbett (Warner Books, 1983), ***The Third Wave*** by Alvin Toffler (Morrow, 1980) and ***The Prospects for Financing Elementary/Secondary Education in the States*** by the School Finance Project (National Institute of Education, December 1982).

TO DISCOVER YOUR STATE'S CONTEXT FOR EDUCATION DECISION MAKING

1. *Collect demographic information. Check figures for school enrollment, proportions for preprimary, elementary and secondary; minorities, handicapped, rural, urban. Are these figures going up or down?*

2. *Collect financial information. Check figures for education revenues (taxes and tax bases), education expenditures (salaries, programs, facilities, per-pupil dollars). Are these figures going up or down?*

3. *Read about and observe the business, social and cultural climate in your state. Are these aspects changing? How?*

2. THE TARGET: OPTIMUM CONDITIONS FOR LEARNING

"The ultimate ideal of American education is to offer positive conditions. . . ."

Optimum conditions must be present for learning to take place. A student who is healthy and encouraged to learn at a comfortable pace, in an environment of trust and respect, will likely succeed.

However, variations in student motivation, knowledge of basic prerequisites and appropriate instruction determine each student's level and type of achievement, rate of learning and attitudes toward a subject. It is the primary function of the schools to understand and to base their academic programs on the premise that almost every student can learn. Toward that end, instruction can be improved significantly.

The optimum conditions for learning are not secret. Most parents know them at least intuitively, good teachers have known them for centuries and research has laid them out time and again. Learning is most likely to take place when:

1. The student is healthy and adequately nourished.
2. Student and teacher trust and respect each other and work in an environment that encourages learning.
3. The teacher assumes the student can learn and expects the student to learn.
4. Both teacher and student believe they can shape their worlds.
5. The student is actively engaged in the learning process, feels relatively free to learn and free to make mistakes in his or her unique style and at a comfortable pace, according to the purpose s/he sees for doing so.

6. Student and teacher spend an appropriate amount of time on the task, and the student has time and encouragement to practice.

7. The teacher is sensitive to individual student needs.

8. The teacher knows enough about the subject to translate concepts into different terms so different students can grasp them.

9. The teacher clearly specifies assignments and standards.

10. The teacher can accurately diagnose problems, imagine ways of meeting them and provide timely, constructive feedback and correctives.

The ultimate ideal of American education is to offer positive conditions for every single student throughout his or her years in the system. Some readers may say, "That's all very nice, but what about the fact that some kids are smarter than others? Won't there always be poor learners, even under optimum conditions?" Benjamin Bloom, a distinguished education researcher at the University of Chicago, would answer "no." The variations in learning that we see in the classroom, which have led us to believe that not all children are good learners, are largely determined, Bloom believes, by two factors:

- Each student's "learning history" — the cumulative record of what he or she has and has not learned — combined with motivation to learn. For example, a disadvantaged child, probably but not necessarily poor, may have far fewer social and cultural "exposures" and much less family encouragement to learn than an advantaged child.

- The quality of instruction the student has received. A poor teacher, even for a year or two, may set back a child's learning progress considerably. Even with good teachers, a child may fail to progress if s/he has not received enough individual attention.

Bloom believes that group instruction is inherently "replete with errors." In any given classroom of 30 students, there are 30 different "learner histories," some of which will enable students to understand the instruction, many of which will not. Unless there is some way to correct the mismatches, such a system "is likely to produce individual differences in learning that continue and are exaggerated over time." He contrasts this "error-full" system of instruction and learning with the "error-free" system represented by the interaction between a sensitive tutor and one learner. He acknowledges that we will always need group instruction, but believes we can move much closer to the one-on-one ideal if we have systematic ways of identifying and correcting the errors inherent in group instruction.

First, however, we must know which factors account for most of the variation in a given classroom. Bloom's research boils the possibilities down to three:

1. The extent to which the student has already learned the basic prerequisites to what is being taught. For example, to understand percentages, a student must know his/her multiplication tables. In a single classroom, student multiplication skills may range from none to complete mastery.

2. The extent to which the student is (or can be) motivated to learn. Certainly, teachers should be skilled and successful motivators, but unless other forces — the family, peer groups, other institutions — reinforce such motivation, it may fall short of what is needed.

3. The extent to which the instruction to be given is appropriate to the learner. Learning is difficult if materials are too far above or below a child's learning level, or if the teacher does not find ways to make the subject alive, relevant and important to the child.

Bloom believes that variations in these three factors will determine each student's level and type of achievement, rate of learning and attitudes toward a subject and himself or herself as a learner.

Both a student's learning patterns and the quality of the instruction in a school can be modified considerably. It follows, then, that "changes in the school environment can relatively quickly (in a single decade) make great changes in the learning of students." How great? Bloom believes that **in theory,** four-fifths of our students could easily learn what only one-fifth learn today.

Problems sure to arise when a theory moves toward practice should not distract us from appreciating the virtues of the theory itself and the values it promotes. Bloom argues persuasively for three principles that must undergird any improvement effort: **almost every student can learn** what the schools have to teach; **instruction can be improved significantly** toward that end; and **that is the primary function of the schools.** He is fully aware that his theory runs contrary to many long-held beliefs about people and learning: "Equality of learning outcomes and virtual equality in the learning process (time, help, means) are very hard to accept in societies that have long accepted the concept of widespread individual differences in school learning," he writes. If his theory is correct, "then the selective function of schools must be largely abandoned in favor of the developmental functions that schools must increasingly serve."

For more on this, read ***Human Characteristics and School Learning,*** by Benjamin Bloom (McGraw-Hill, 1976).

3. THE CHARACTERISTICS OF GOOD TEACHERS AND GOOD SCHOOLS

"All of us remember a teacher or two who inspired us. . . ."

Effective teachers have high expectations and respect for each student; they plan and manage their classroom time for optimum academic focus; they establish rules and standards and adhere to them; they allow for review; they provide feedback; and they recognize student problems.

Some schools are more successful than others, not necessarily through luck or tradition. But where you find teachers who inspire and challenge students to do their best, where you find staff development opportunities and mutual respect between teachers and administrators, there you will find a good school.

GOOD TEACHERS

Effective teachers somehow seem able to help more students learn more with less wasted time and energy. They come in all sizes, shapes, colors, ages and personalities and can be found teaching any course. All of us remember a teacher or two who inspired us or challenged us or helped us discover something about ourselves or the world that we have never forgotten. Those are the effective teachers.

Much of the research indicates that good teachers are good people — open, caring, conscientious, curious, imaginative, disciplined and well-grounded in their fields of expertise. But it is clear that a good person can be a poor teacher, so goodness is not enough.

Effective teachers know about the best conditions for learning and structure their interaction with students to approach those conditions. Specifically, they:

- Hold and communicate high (but realistic) expectations for each student, knowing that if the material to be learned is properly shaped, each student **can** learn it
- Know how to plan for instruction and manage the classroom, perform fair evaluations and handle contingencies with little or no academic down-time
- Establish and communicate clear rules and standards of behavior so that little time is wasted on discipline or interruptions
- Explain clearly what is expected of each student
- Allow enough time for review and practice
- Provide clear, frequent and useful feedback to students about how they are doing
- Know how to diagnose student problems, interpret student interests and convey information in different styles and forms for different learners
- Respect students, listen sympathetically to them and disagree with them without condescension or overindulgence

For more on effective teaching, read ***Learning From Teaching*** by Brophy and Evertson (Allyn and Bacon, 1976); ***Organizing and Managing the Elementary School Classroom*** by C.M. Evertson (Research and Development Center, University of Texas, 1981); ***The Scientific Basis of the Art of Teaching*** by N.L. Gage (Teachers College Press, 1978); ***Effective Instruction*** by T. Levin (ASCD, 1981); ***School Teacher*** by D.C. Lortie (University of Chicago Press, 1973); ***Research in Teaching: Concepts, Findings and Implications*** by Peterson and Walberg (McCutchan, 1979); and ***Fifteen Thousand Hours*** by M. Rutter (Harvard University Press, 1979).

GOOD SCHOOLS

In each school, many different but interdependent factors combine to create an ecosystem, with a particular ethos and ambience, that will determine how good learning conditions are for each student. It is important to view each school almost as an organism and to realize that changes in one or two or even several components may have no effect at all on such a complex system of human relationships and institutional checks and balances. Some changes may be negated by others and must be observed in the context of the whole system. The effects of other changes may not be perceivable in isolation and will only appear in some holistic measure of the system's general well-being.

Inside this ecosystem, the major components that directly impinge on each student's learning opportunities are:

- The teachers — their knowledge, attitudes toward themselves and their students and their pedagogy, i.e., the **way** they teach
- The explicit curriculum — **what** is taught, how much time is devoted to this or that, etc.
- The implicit curriculum — that combination of rules, regulations, human interactions, resources, logistics and design features that establishes, largely unconsciously, the learning environment

The teachers and their pedagogy, the explicit curriculum and the learning environment all condition four factors that powerfully affect achievement: **expectations, style of instruction** (e.g., lecture, "hands-on," collaboration, etc.), **amount of time** spent actually engaged in learning and **relevance** of what is learned to the students themselves. These factors determine each student's "access to knowledge." Expectations, instructional style, efficient and balanced use of time and relevant content are heavily influenced by:

- The leadership of the principal. Research tells us that principals can be **instructional** leaders, heavily involved in interaction with teachers and in selecting instructional materials.

- The degree to which teachers are isolated or are able to collaborate. Teachers who are "islands," cut off from productive interchange with other teachers, are likely to find professional growth difficult.

- The training — preservice and inservice — of teachers and administrators. As important as how teachers are initially trained is the frequency and quality of special training during their working years.

- The available human and financial resources. Good teachers must be available as well as adequate facilities, materials and programs.

- The institutional constraints, such as Carnegie units, state or district mandated curriculum, minutes per class hour, number of students per class, size of school, etc.

The leadership of the principal, training of the teachers, the resources, curriculum and institutional constraints are "givens" for any school. For the most part, they are not perceived as "chosen." They have either derived from luck and tradition, been imposed from outside by community or state goals and values, or accreted through years of unrelated decisions by literally thousands of people. They too are influenced by other factors: the quality of teacher and administrator training institutions, the leadership of district superintendents, court decisions involving finance or desegregation, state or federal inservice education programs and so on.

All of these things considered, some schools still perform better than others, irrespective of the populations they serve. Two schools can both serve disadvantaged communities, but one may do so more effectively and with better results than the other. Research has shown that there are great differences from school to school in the amount of time allocated for academic work, the amount of time students are engaged in classroom learning, the amount of energy consumed in maintaining discipline and many other factors affecting students' opportunities to learn. Good, effective schools, then, not only embrace the characteristics of good teachers and the optimum conditions for learning, but:

- Everyone knows what must be done — where the school is heading, what it is trying to accomplish, what the priorities are and how curriculum, instruction and evaluation work in concert to further the school's goals.

- Effective schools generate a strong sense of community. People are working together, not in isolation, in pursuit of common goals and in response to shared values. Parent and community involvement is sought, respected and publicized.

- Strong leaders — administrators and teachers — set a positive and often enthusiastic tone for achievement, keep the focus on sound instruction and **lead.**

- All staff have high expectations for students, believing that all students can learn.

- Students' learning progress is measured in a number of different ways, watched closely and analyzed periodically to see that their needs are being met.

- Incentives and awards make success and recognition available to every student at numerous points in his or her development.

- Teachers are given staff development opportunities that mesh with the school's carefully considered plans for improvement.

- Disruptions in the school day and noninstructional time are minimized, and the school environment is safe and orderly.

These research findings do not constitute a simple checklist of what a school should do to be effective. Rather, they give us an idea about how, why and under what circumstances certain practices work better than others.

For more information about effective schools, read ***The Effective Principal*** by Blumberg and Greenfield (Allyn and Bacon, 1980); ***Effective Secondary Schools*** by W.B. Brookover (Philadelphia: Research for Better Schools, Inc., 1981); ***The Principal as Instructional Leader*** (Northwest Regional Educational Laboratory, 1980); ***Elementary School Principals and Their Schools*** by Goldhammer and Becker (Eugene, Ore.: Center for the Advanced Study of Educational Administration, 1971); ***Principal Differences: Excellence in School Leadership and Management*** by Huff, Lake and Schaalman (McBer and Co., 1981); ***Effective Principal, Effective School*** (National Association of Secondary School Principals, 1981); ***Considering the Research: What Makes an Effective School;*** and ***School Effectiveness*** by Madaus, Airasian and Kellaghan (McGraw-Hill, 1980).

TO FIND OUT MORE ABOUT GOOD TEACHERS AND GOOD SCHOOLS

1. ***Read the research suggested here.***
2. ***Visit schools that have been identified as "good." Every state has some; check with the state education agency.***
3. ***Talk with teachers and principals in these "good" schools.***

4. RECENT REFORM REPORTS

"There is considerable consensus across the reports. . . ."

Ten major reports, published in 1983 and 1984, collectively address six areas of needed reform: (1) a definition of education goals and roles of schools and other institutions in reaching those goals; (2) broad coalitions and partnerships necessary for renewal; (3) better access to knowledge; (4) revision of explicit curriculum; (5) assessment of implicit curriculum; and (6) higher levels of achievement, including improving instruction, better use of time, improved leadership, etc. Although all the reports have a similar focus, each differs in its specific suggestions and conclusions.

In 1983 and 1984, ten major reports on education appeared:

A Nation at Risk, National Commission on Excellence in Education
Action for Excellence, ECS Task Force on Education for Economic Growth
Academic Preparation for College, College Entrance Examination Board Educational Equality Project
Making the Grade, Twentieth Century Fund
America's Competitive Challenge, Business-Higher Education Forum
The Paideia Proposal, Mortimer Adler and the Paideia Group
High School, Carnegie Foundation for the Advancement of Teaching
Meeting the Need for Quality, Southern Regional Education Board
A Place Called School, John I. Goodlad
Horace's Compromise, Theodore Sizer

More major reports are coming and dozens of less-publicized local, state or regional reports have been released. Although each report has its own particular focus, there is considerable consensus across the reports about the urgent need for reform and what needs to be done. There are great differences in the specificity of the reports, their suggestions for **how to do** what needs to be done and how strong a role federal, state or local leaders should play in renewal. Collectively, the reports address needed reform in six general areas:

1. There must be clear definition of the **goals** of education, the **unique role of the schools** in reaching those goals and the **roles other institutions** can play in a society with many means of educating its citizens besides schools.

2. **Broad coalitions** and **partnerships** are necessary for renewal. Our education system can no longer be perceived as an isolated institution that somehow gets into or out of trouble by itself. Correlatively, if there are to be broader coalitions working to improve education, there must be **better information** available and **better information flow** between and among the many levels of government, agencies, partners, educators and publics involved. Already, for example, business (by supplying personnel and equipment) and post-secondary institutions (by offering special opportunities for teacher inservice training) are cooperating with K–12 schools to instill new technological skills in students.

3. There must be better **access to knowledge** in the schools in order to provide every child the maximum possible conditions for learning. Lessons and materials must be presented in ways that make learning easy and exciting for students.

4. The **explicit curriculum** needs revision — to include **new** material, to **prune extraneous** material and to **highlight new skills** mentioned but not taught in the current curriculum. For example, history and science courses need to be updated or supplemented regularly.

5. The **implicit curriculum** — the circumstances surrounding teaching and learning — needs to be brought into consciousness and assessed to determine how it is forwarding or inhibiting learning.

6. We need **higher levels of achievement** and **more students involved** in

   - Higher level skills such as analysis, evaluation and synthesis (students should be able to pull together information from a variety of sources — i.e., books, media, other people, their own experience, categorize it, decide whether it is valid and come to reasonable conclusions)
   - Skills in learning how to learn, i.e., taking advantage of the available learning conditions, not only in the classroom, but in libraries, media and even in play
   - Mathematics, science and foreign languages

   and we need to analyze the schools' roles in fostering

   - Career preparation and vocational education
   - Nonacademic goals such as good citizenship, ability to work with others, self-confidence, etc.

SAT SCORE AVERAGES FOR COLLEGE-BOUND SENIORS, 1974–84

	Verbal	Mathematical
1974	444	480
1975	434	472
1976	431	472
1977	429	470
1978	429	468
1979	427	467
1980	424	466
1981	424	466
1982	426	467
1983	425	468
1984	426	471

Source: College Board.

PERCENTAGE OF 1982 HIGH SCHOOL GRADUATES WHO MET CURRICULAR RECOMMENDATIONS OF THE NATIONAL COMMISSION ON EXCELLENCE IN EDUCATION, BY SUBJECT AREA AND SELECTED SCHOOL CHARACTERISTICS: 1982

Characteristic	All Recommendations
All graduates	1.8%
Grade span of school	
K–12	1.5
9–12	1.8
10–12	2.0
School enrollment size	
Less than 600	1.0
600 to 1,800	2.4
More than 1,800	1.5
Region	
New England	3.6
Middle Atlantic	5.3
South Atlantic	1.3
East South Central	0.1
West South Central	0.2
East North Central	0.8
West North Central	1.4
Mountain	1.2
Pacific	0.8
Community type	
Urban	1.8
Suburban	2.0
Rural	1.5

Source: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, transcript of unpublished tabulations (October 1983).

It is with regard to the sixth area that many specific suggestions for reform have been made. These cluster around:

- Improving our **system of instruction** and **pedagogy**
- **Better use of time** in the school day, in the classroom and through the year
- Better **teacher preparation** and more attractive teacher **career ladders** and **work environments**
- Better **management** of the school and classroom
- Greater **accountability** for the results of schooling
- Improved **leadership** within the school

A final area, addressed particularly by Goodlad and Sizer, is this: we need to **bridge the gap between our ideals and our practice.** Education has received good advice from outside and within for over a hundred years. Every state in America can produce lofty and comprehensive documents rich in idealism. But research establishes again and again that we do not practice what we preach. Unless we understand the social and institutional constraints that have made it impossible to honor our ideals in the past, our renewal recommendations will only contribute to an already vast but unread library.

For a synthesis of the various reform reports see ***A Summary of Major Reports on Education*** by the Education Commission of the States. ***Action for Excellence*** and its 1984 followup report ***Action in the States*** can also be ordered from ECS. See also, ***Charting a Course: A Guide to the Excellence Movement in Education*** by Ian McNett (Council for Basic Education, 1984).

5. CHANGING SCHOOLS

"Schools are more like organisms than machines. . . ."

There is no "quick fix" for education. To begin with, we need to look for the vital signs of health, such as student, parent and teacher satisfaction, flexibility, creativity, productivity and optimism.

The greatest obstacles to changes in education are lack of self-knowledge, demands of managing large groups of students, isolation, poor training and lack of vision.

Experience also suggests citizens want schools to meet four major goals: academic, vocational, civic and social, and personal development. Schools seldom know how well they are doing in each area. Hence, standards should be established by each school that would increase self-awareness and measure progress.

We know now that education is only a "loosely coupled" system and that overly rationalistic models of teaching and administering schools are inadequate. Change strategies must rest on the deeper understanding of the school environment that research and experience have made available to us or they will not work.

Education is an art, not a science. Neither education itself nor the institutions we have created to inculcate it are remotely like production lines in which changes can be made at various way stations, guaranteeing better products at the end of the line. We must free ourselves from misleading metaphors, grandiose visions of sweeping change and our deep hunger for quick fixes. Schools are more like organisms than machines. They are arrangements of personal relationships built upon varying degrees of trust and mistrust, personal goals compromised by social goals, varying degrees of responsibility and freedom to choose, and conflicting ambitions. Rather than thinking about how to tune up an engine, we should be thinking about how to restore health and hope to an ailing organism. That can only be done by carefully observing the organism, its environment and the stresses with which it is trying to cope. Some vital signs of health to look for in each school are **acceptable levels of satisfaction** — of students, parents, teachers and administrators; **flexibility; creativity** in solving problems; **productivity;** and **optimism,** for starters.

John I. Goodlad has been a careful observer of schools for decades. In his recent study ***A Place Called School,*** he found that schools differed markedly in these and other holistic vital signs. He concludes that renewal can only come about one school at a time and the process must begin with a careful look at the school as an ecosystem, an organism with a distinct personality congenial or inimical to growth and change. From his point of view, the greatest obstacles to change are:

- **Lack of self-knowledge.** Few schools know what they need to know to change: exactly what their functions are; how relevant instruction is to community needs; how teachers are teaching; how they have distributed resources across learning areas; how access to knowledge varies for different students; how much time is really spent on instruction; what their priorities are; and more. Without such knowledge, people within the school cannot determine if there is any difference

between what they **think** they are doing and what they are **really** doing. They cannot be convinced there is any **need** for change, and if they were, they would not know where to start.

- **The demands of managing large groups of students** in a small place — the classroom. These demands determine and limit the ways people teach. Most teachers have adopted a lecture approach that leaves students out of any important decisions, relegates students to passive roles, rules out collaborative and hands-on activities and discourages extended discussion, reading or writing. Even teachers who have learned other ways of teaching find these demands so insistent that they must eventually succumb to the dominant pedagogy even though they know it is inferior.

- **Isolation** — of teachers from one another, of teachers and administrators — even, ironically, of teachers from students. Change has no chance if the people we expect to change are cut off from one another and have no support for collaboration and collegiality.

- **Training.** Most teachers simply do not know how to teach higher-order skills or to link facts to concepts, or how to evaluate writing or give students a larger role in their education.

- **Lack of vision.** Even "advantaged" schools appear to have no interest in trying new approaches that run against practices that have prevailed for over 50 years. Thus, poor schools resist change because "we're so busy trying to keep our heads above water" and good schools resist change because they see no reason to change! The structure of the schools forces emphasis to be always on short-term considerations. Education is broken into so many little units — grades, terms, units, 50-minute class periods — and spread across so many teachers and schools that hardly anyone ever takes a long view about anything.

To provide each child with such optimal conditions for learning as can be obtained in an institutional setting, each school must find the time over the next year or two to take a good hard look at itself. Each school could establish an "index of satisfaction," as simple as a grading system from A to F or as elaborate as the instruments used by researchers to create school case studies. Students, teachers, administrators, aides and parents could be asked a common set of questions and a set of questions particular to their sphere of experience and expertise.

Goodlad found teacher satisfaction to be a good predictor of school quality. But the effective schools research establishes a number of other indicators, any of which could easily become part of a satisfaction questionnaire. Such a questionnaire should provide answers to such questions as:

- Which groups — students, teachers, parents or administrators — are most satisfied?
- What are the major strengths and problems each group identifies? How do their perceptions differ?
- What ideas do people in each group have for addressing problems?
- How well do people in each group seem to understand the responsibilities and problems faced by people in the other groups?
- Which of the four major sets of school goals — academic, vocational, personal development and civic — do people in each group see receiving most and least emphasis in the school?

The answers to such questions become raw material for discussion and debate about **what** the school is doing as well as how satisfied people are with its progress. This leads naturally to discussion about the goals of schooling and what is being done to meet them. Experience suggests that citizens want their schools to meet four major goals:

- **Academic.** They want students to obtain a sound grounding in reading, writing, mathematics, literature, history and so on.

- **Vocational.** They want students to know about the world of work and be prepared to enter it with appropriate knowledge, skills, attitudes and work habits.

- **Civic and social.** They want students to appreciate the values of this and other societies, to know how to be useful citizens and to know how to get along with others.

- **Personal development.** They want students to develop confidence in themselves, develop independence and judgment, be able to make moral choices and understand themselves sufficiently to grow and learn productively.

Each of these major goals is supported by a strong constituency, but all the goals are considered "very important" in survey after survey. So each school must deal with all four goals. What it needs to know, however, in order to set the stage for renewal, is exactly **how** it is addressing each goal and with what measure of success.

Goodlad and others found marked differences in the ways schools distributed resources between the first two goals; some schools were far more heavily committed to vocational goals than others, although, interestingly, the people in the more vocationally oriented schools did not really know how their resources were distributed. It behooves each school, then, to determine how many teachers and what percentage of school time are devoted to different goals and the curricula tied to the goals. With that information in hand, a school can begin to establish resource priorities. Goodlad suggests that 18% of a high school student's program should be devoted to literature and language, 18% to mathematics and science, 15% to social studies, to the arts and to vocational education, leaving 10% for individual choice. Supposing that a school chose similar proportions as a target, the question to ask after a study would be whether such a balance could be achieved given the present distribution of resources.

Between the major goals endorsed by almost everyone and the day-to-day activities of teachers there lies a host of subgoals, objectives, subobjectives, curricular guidelines and mandates,

textbook goals and objectives and subobjectives, workbooks, tests, assignments, lesson plans and accommodations to available time, resources, interruptions, experience and training. Somewhere in this maze, the intentions behind the goals get lost or transformed beyond recognition. Here lie the bones of many a noble suggestion for reform. Some teachers are advancing toward these goals and know it; some are advancing toward them but think they aren't; many — most, if Goodlad is correct — think they are advancing toward them but are not. Teachers — helping each other, aided by inservice or preservice programs and with strong, positive leadership by the principal — are going to have to attack this vexing gap between what is preached and what is practiced. In finding out more about what they are doing — how they are spending their time, how students interpret their efforts, how respected colleagues seem to accomplish more, etc. — teachers can lay the groundwork for an improved pedagogy and an improved curriculum.

Most research indicates that more efficient use of time and improved teaching methods could greatly improve each student's opportunity to experience optimal conditions for learning. But teachers need to know more about how they spend their time and how they are teaching if they are to be enlisted in the effort to improve education. And they need to find these things out themselves through positive, nonthreatening processes that build professional skills and enhance self respect. Along the way, they will identify many administrative and logistical factors that inhibit their ability to do their jobs as well as they would like to. These factors must then become the subjects of far-ranging discussions throughout the school. Some of them will be "givens" beyond the school's power to alter. Many of them will be alterable if the desire for change is strong enough.

What are the standards each school should be striving to meet? It depends, of course, upon where each school finds itself. To begin with, standards can be simply expectations that the school **will** do a time audit within the next year or so; **will** examine resources; **will** initiate dialogue about goals, structural constraints on teaching and such issues as tracking or the relationship of vocational education programs to the rest of the curriculum. Having begun, a school can set more specific standards: we want our satisfaction rating to rise, we want our wasted time reduced 20% by next year, we want four inservice programs on teaching higher-level skills, etc.

Testing should, of course, continue, but no longer as the sole source of information about progress. Many schools could decide, after a thorough time audit, that testing is taking up more time than the utility of the results would justify. And since many of the skills we now want teachers to develop are difficult to assess with multiple-choice tests, we would expect schools to change and broaden their tests considerably. Appropriate standards for tests and schoolwide assessments will vary from school to school. Obviously a basic standard is for scores to go up on school and nationally standardized tests, rather than down. But they cannot go up forever and, if they're already high they may not reflect positive changes in attitude and achievement at all. That is why they cannot be the sole indicator of progress and must be accompanied by a range of other indicators such as **attitude surveys, individual work folders, teacher judgments, time audits** and **parent feedback. Vital signs of a healthy ecosystem, such as flexibility, creativity, optimism** and **collaboration** should also be assessed through interviews, observation and questionnaires.

To accomplish this increased self-awareness, each school may well want to establish an interdisciplinary policy committee or "change team" led by experienced teachers and the principal. If the school determines it wants to enter into partnerships with business groups or other schools, representation could include outsiders. The most important aspect of this process, however, is that it be under the control of the school itself, not an outside agency. The people who live with decisions to change their environment must take the responsibility for those changes if they are to have lasting value. And problems must be seen and attacked as part of a **system,** not as isolated features of the school.

For more on this subject, read ***A Place Called School*** by John Goodlad (McGraw-Hill, 1983); ***Effective Organizational Renewal in School*** by R.C. Williams (McGraw-Hill, 1974); ***The Culture of the School and the Problem of Change*** by S.B. Sarason (Allyn and Bacon, 1971); ***The Role of the Principal in Change*** by Rosenblum and Jostrzab (Abt Associates, n.d.) and ***Implementing Organizational Innovations*** by Gross and Giaquinta (Basic Books, 1971).

6. THE RENEWAL PROCESS OUTSIDE THE SCHOOL BUILDING

"The schools need help in putting new ideas to work. . . ."

State departments of education and school districts can provide the support needed by schools in managing the change process and putting new ideas to work.

Both states and districts should have targets and standards to aim for, including process standards that describe the plans and programs that districts and states should aim to have in place within the next several years. They should also collect "output" indicators that would include a broad range of qualitative and descriptive, as well as quantitative, data on such topics as test scores, pupil/teacher ratios, absentee and dropout rates, teacher attrition, etc.

The schools need help in acquiring self-knowledge, managing the change process, examining alternative improvements and putting new ideas to work. They need the time to do these things and the necessary information, measurement tools and specialized expertise.

- District central offices can provide these things as well as the moral support and reinforcement the effort requires. District personnel can conduct studies that individual schools cannot or that are best carried out on a larger scale. District experts can help assess costs and can collect and share information about the renewal efforts of various schools. Districts can set ranges for balancing the curriculum or improve the process by which principals are selected to provide the right kinds of leadership for each school. Large districts can establish centers for the study of alternative curricula and new ways to teach.

- Intermediate units, technical assistance centers, state departments of education and business/industry partners with appropriate expertise can support each district in the same ways the district is supporting renewal of each school. They can synthesize research, cosponsor seminars and workshops, supply experts, create measurement devices and build networks among the schools and districts undergoing renewal.

- The state is ultimately responsible for articulating a set of comprehensive, conceptually consistent education goals, creating incentives for renewal, clearing roadblocks to change and, in general, legitimating the entire process. State experts can develop and disseminate material about alternative pedagogies, curricular design and successful improvement efforts.

Both districts and states should have targets and standards to aim for. Just as test scores alone will not suffice for individual schools, they are necessary but insufficient indicators for districts and states. Some of the indicators will have to be quantitative — test scores, attendance figures, percentages of 10th graders exposed to a balanced curriculum, etc. — and some must be qualitative — satisfaction indices, evaluation team reports or positive feedback from the business world or higher education institutions.

What might some such standards be? Here are some examples.

STATE AND DISTRICT PROCESS STANDARDS

Process standards describe the plans and programs districts and states should aim to have in place within the next several years, to stimulate and guide the process of school renewal. If such programs are in place, public consciousness of renewal will be high, broad coalitions will be committed to the effort, appropriate information will be available for discussion and debate and the capability of each school to effect change will be enhanced.

STATES

1. Using a model for bringing about change that is most appropriate and effective for your state (e.g., it could be initiated by the governor, the chief state school officer, a task force, or it could filter up from local districts), develop a comprehensive state plan for school improvement that includes:

   - Ample input from business, government, education, labor and lay citizens
   - Clear assignment of responsibility to all major actors in the education enterprise (governors, key legislative committees, chief state school officers, teachers, superintendents, etc.)
   - Attention to all curricular areas, including vocational education, the arts, etc.
   - Three different models for improving the appropriateness, quality and quantity of instruction
   - Clear and frequently used channels of communication between all involved actors, agencies, associations, etc.
   - Mechanisms for providing assistance to districts
   - Widespread media coverage and thoughtful dissemination of information to all actors and the general public

2. Include long-range plans for improving teacher and administrator training and public appreciation for their hard work. Elements should cover:

   - Certification requirements for both teachers and administrators
   - Career ladders for teachers
   - A hard look at teacher training institutions and plans for their improvement
   - Permanent or periodic state-funded institutes for training current principals and teachers in school effectiveness techniques
   - Criteria for evaluating teacher and principal effectiveness

3. Publicize the plan widely and provide mechanisms for further public input and continuing dialogue about major issues.

4. Analyze the flow of information about education in your state, spot potential roadblocks to progress or sources of friction and misunderstanding, and devise ways to improve information flow and resolve conflicts.

5. Convene state and district people who compile the statistics necessary for monitoring progress and develop a plan for gathering, coordinating, analyzing and publicizing those key statistics in an accurate, efficient and easily understandable form.

6. Use state "clout" to help districts and schools set up partnerships with local business, industry or labor organizations.

7. Allocate funds for renewal and establish incentives for creative approaches to improved education.

8. Develop plans for reviewing the textbook adoption process and criteria employed in evaluating textbooks and materials for appropriateness and quality.

9. Lay out plans for reexamining state education goals and their links to curriculum and pedagogy. Goals should be broadened to include new skills, prioritized, conceptually harmonized and disseminated to districts.

10. Set up plans for reexamining state testing and assessment programs and measuring achievement and attitude changes periodically.

11. Sponsor "centers of excellence," pilot schools and laboratories devoted to improving the curriculum and teaching practices.

12. Develop plans for introducing technology into the system in ways that maximize its utility and minimize the "Tower of Babel" effect.

DISTRICTS

Districts, depending on their size and staff expertise, could be engaging in activities 1, 3, 4, 5, 8, 9, 11 and 12.

"OUTPUT" INDICATORS FOR STATES AND DISTRICTS

The further away one gets from individual schools, the more abstract our information becomes about what is going on in them. As information becomes more abstract, important shades and subtleties disappear; great improvements in one area of the state may be washed out by difficulties somewhere else. Statistical indicators tend to regress toward the mean and important changes do not show up as "statistically significant" in the data. People all over the state could be convinced that great changes had taken place but be unable to "prove it" with data aggregated across so many different districts and schools.

Accordingly, everyone charged with aggregating data and reporting results must share the limitations of current measurement techniques with all who will be interpreting and using the results. And every effort should be made to create a broad **range** of indicators rather than relying on just a few. If you cast a broad net, you're more likely to get more fish and more different kinds of fish. It would be a shame if an effort as complex and wide-ranging as school renewal were evaluated inadequately.

Quantitative data should be accompanied by qualitative and descriptive data. A state could appoint an evaluation team, for instance, which might visit key schools and report about the activities and ambience it finds in different kinds of schools. Districts could combine their quantitative data with reports on schools' time audits, satisfaction indices and morale reports.

In addition to polls, test scores, descriptive data, interpretive judgments of knowledgeable leaders and summaries of evaluation visits and case studies, states with districts' help should continue to collect quantitative indicators such as the following:

- Enrollments in public and private schools
- Pupil/teacher ratios
- Cost/pupil indicators
- Percentage of students exposed to a balanced curriculum
- Percentage of students by race, sex and socioeconomic status in regular, low track and remedial courses
- Percentage of students in preprimary programs
- Absentee and dropout rates
- Average minutes/day per course, type of school
- Teacher attrition rates
- Teacher preparation statistics

TO HELP SCHOOLS MOVE TOWARD RENEWAL

1. *Find out what is being done now in your state.*
2. *Check with your governor's office, your state legislator, state and local school boards, recognized education experts.*
3. *Learn from successful programs in other states and apply or modify them for your own state, or help decision makers do it.*
4. *If you see progress, get behind it. Talk about it. Offer to help.*
5. *If you do not see progress, initiate it, or bring the lack of progress to the attention of those who make decisions on education policy.*

7. MORE INFORMATION ON THE ISSUES

The Education Commission of the States publishes materials and answers questions about a wide array of issues. Short, readable syntheses of information about major topics are available in the ECS **Issuegram** series, which includes the following titles:

No. Title

TEACHERS AND TEACHING

1. Research Findings on Effective Teaching and Schools
5. Collective Bargaining Issues Continue
7. Testing for Teacher Certification
23. State Policies To Screen and Attract Teachers
24. Teacher Shortages in the Next Decade
37. Teachers' Rights to Free Speech and Academic Freedom
41. Restructuring Careers in Teaching
45. Quality of Teachers: Standards and Incentives
49. Home Instruction

SCHOOL IMPROVEMENT AND EDUCATION EXCELLENCE

1. Research Findings on Effective Teaching and Schools
5. Low-Cost School Improvement
11. State Programs of School Improvement
38. State Strategic Planning for Technology
45. Society Challenges Education

STUDENT ACHIEVEMENT

2. Achievement Trends in the Arts
6. Achievement in Mathematics and Science
9. How Well Can Students Read and Write?
16. Student Achievement in Public and Private Schools
20. Student Minimum Competency Testing
36. Legal Rules for Student Competency Testing

LAW AND EDUCATION

10. Special Education and the Law
12. Compulsory Schooling and Nontraditional Education
22. Regulation of Postsecondary Institutions: Model Legislation
27. School Finance Litigation
33. Prayer, the Bible and the Public Schools
34. Curriculum and the Constitution
35. Sex Equity in Public Education
36. Legal Rules for Student Competency Testing
37. Teachers' Rights to Free Speech and Academic Freedom
44. Race Equity in Education
48. New Plans for Teachers: Legal Requirements
49. Home Instruction

SCHOOL FINANCE

19. Tuition Tax Credits
21. Improving Higher Education Through Budget Incentives
25. School Finance Equity
26. School Finance Reform: Past, Present and Future
27. School Finance Litigation
28. Programs for Special Student Populations
32. Implementing the Education Block Grant
43. School Facilities and Deferred Maintenance
47. Equity and Excellence: Finance Implications

GOVERNANCE

15. Setting Up Blue Ribbon Commissions
29. Responding to Change: Goals for State Public Education
30. State Structures of Elementary/Secondary Governance
31. The State Legislative Voting Process in Education
32. Implementing the Education Block Grant
42. Boards, Departments, Chiefs and State Education Policy

HIGHER EDUCATION

21. Improving Higher Education Through Budget Incentives
22. Regulation of Postsecondary Institutions: Model Legislation
40. Postsecondary Program Review

ALSO AVAILABLE

4. Adult Learning: A Major Trend
8. Energy Education: Another Passing Fad?
14. The Four-Day School Week
18. School Programs To Prevent Drug Abuse
39. Migrant Education
50. Direct Writing Assessments in the States

In addition, full reports are available on such issues as:

- School finance
- Teacher quality
- Pay-for-performance systems
- School improvement
- Governance
- Equity
- Private education and home study
- Legal issues in such areas as teacher testing and handicapped education
- Postsecondary education

For more state-by-state financial data, ask ECS for its two-page wall chart, ***School Finance at a Glance.***

For information about what states are doing to improve education, ask ECS for ***Action in the States*** (1984).

OTHER SOURCES OF INFORMATION

- National Center for Education Statistics, Washington, D.C.
- National Institute of Education, Washington, D.C.
- U.S. Commerce Department, Bureau of the Census, Washington, D.C.
- State data centers: outlets for U.S. Census data in each state. Write Bureau of the Census, U.S. Department of Commerce, Washington, D.C. 20230 for a list of centers.
- State demography offices
- State education agencies and/or state boards of education

APPENDIX
SELECTED STATE-BY-STATE STATISTICS

	Operating School Districts, 1983–84	Per-Capita Income (% of National Averages)	Per-Pupil Expense (% of National Averages)	1981–82 Per-Pupil Expense in Dollars
ALABAMA	128	78	54	2,063
ALASKA	53	146	196	6,429
ARIZONA	217	92	76	2,462
ARKANSAS	367	76	69	1,841
CALIFORNIA	1,029	113	98	2,671
COLORADO	181	111	98	2,914
CONNECTICUT	165	124	120	3,189
DELAWARE	19	106	125	3,198
DISTRICT OF COLUMBIA	1	131	130	3,792
FLORIDA	67	99	99	2,528
GEORGIA	187	86	78	1,862
HAWAII	1	105	107	2,862
IDAHO	116	81	74	1,996
ILLINOIS	1,007	109	109	2,936
INDIANA	305	90	80	2,306
IOWA	439	97	105	2,826
KANSAS	305	106	104	2,815
KENTUCKY	180	80	78	1,857
LOUISIANA	66	92	97	2,829
MAINE	228	81	88	2,205
MARYLAND	24	110	117	3,235
MASSACHUSETTS	376	109	105	3,137
MICHIGAN	571	99	121	3,145

Total K–12 Enrollment, Fall 1982 (Thousands)	K–12 Minority Students % of Total, 1980	K–12 Minority Students % of Change, 1970–80	K–12 Teachers Totals % of Change 1970–81	Average Teacher Salaries 1983–84 in Dollars
724	34	– 7	+ 4	18,000
89	28	+11	+48	36,564
510	34	+ 5	+36	21,605
433	24	– 2	+11	16,929
4,065	43	+16	+12	26,403
545	22	+ 3	+23	22,545
486	17	+ 5	+ 8	22,624
93	29	+ 7	–12	20,925
91	96	NA	–31	27,659
1,485	32	+ 4	+20	19,545
1,054	34	+ 1	+28	18,505
162	75	NA	+10	24,357
203	8	+ 4	+22	18,640
1,880	29	+ 7	– 7	23,345
1,000	12	+ 2	+ 2	21,587
505	4	+ 2	– 4	20,140
407	13	+ 4	+ 1	19,598
651	9	0	+ 5	19,780
776	43	+ 2	+10	19,100
212	1	0	– 4	17,128
699	34	+ 9	– 4	24,095
909	11	+ 5	+13	22,500
1,761	21	+ 6	+15	28,877

	Operating School Districts, 1983–84	Per-Capita Income (% of National Averages)	Per-Pupil Expense	1981–82 Per-Pupil Expense in Dollars
MINNESOTA	433	101	109	2,905
MISSISSIPPI	154	70	68	1,706
MISSOURI	546	92	84	2,342
MONTANA	546	86	101	2,998
NEBRASKA	955	96	97	2,704
NEVADA	17	108	82	2,424
NEW HAMPSHIRE	158	97	83	2,502
NEW JERSEY	592	118	141	3,515
NEW MEXICO	88	83	96	2,703
NEW YORK	728	111	146	4,280
NORTH CAROLINA	142	81	88	2,099
NORTH DAKOTA	283	98	104	2,729
OHIO	615	96	92	2,492
OKLAHOMA	615	102	99	2,667
OREGON	307	93	125	3,299
PENNSYLVANIA	500	99	110	3,050
RHODE ISLAND	40	97	124	3,040
SOUTH CAROLINA	92	77	69	1,876
SOUTH DAKOTA	195	87	81	2,300
TENNESSEE	142	80	71	1,895
TEXAS	1,099	103	79	2,229
UTAH	40	80	67	1,931
VERMONT	274	86	99	2,763
VIRGINIA	139	100	90	2,397
WASHINGTON	299	104	104	2,650
WEST VIRGINIA	55	79	88	2,593
WISCONSIN	432	97	116	2,935
WYOMING	49	111	125	3,417
	15,567	100%	100%	2,724 average

Total K–12 Enrollment, Fall 1982 (Thousands)	K–12 Minority Students % of Total, 1980	K–12 Minority Students % of Change, 1970–80	K–12 Teachers Totals % of Change 1970–81	Average Teacher Salaries 1983–84 in Dollars	
715	6	+ 3	− 2	24,480	
468	52	+ 1	+ 8	15,895	
803	15	0	0	19,300	
152	15	+ 8	+11	20,657	
269	11	+ 3	+ 1	18,785	
151	19	+ 5	+45	23,000	
160	1	+ 1	+31	17,376	
1,173	28	+ 8	+ 4	23,044	
269	57	+ 9	+23	20,760	
2,719	32	+ 7	−11	26,750	
1,097	32	+ 1	+13	18,014	
117	4	+ 2	− 9	20,363	
1,860	15	+ 2	− 8	21,421	
594	21	+ 5	+20	18,490	
448	9	+ 4	+ 4	22,833	
1,784	15	+ 2	0	22,800	
139	8	+ 3	− 1	24,641	
609	44	+ 2	+12	17,500	
124	8	+ 2	− 8	16,480	
828	25	+ 3	+15	17,900	
2,986	46	+ 9	+23	20,100	
370	7	+ 1	+14	20,256	
91	1	+ 1	+ 6	17,931	
976	28	+ 3	+16	19,867	
739	14	+ 7	+ 4	24,780	NA = not available.
375	4	− 1	+32	17,482	
785	9	+ 3	+ 5	23,000	Source: *National Center for*
107	8	− 1	+45	24,500	*Education Statistics.*
39,643	27	+ 6	+ 3	22,019	

TRENDS IN EDUCATION: 50 STATES AND D.C. 1972–73 to 1992–93

(Numbers in Thousands)

Characteristic	1972–73	1982–83	% of Change 1972–73 to 1982–83	1992–93[1] (Projected)	% of Change 1982–83 to 1992–93
School-age and college-age populations[2]					
5–13 years old	35,679	30,431	−15	33,400	10
14–17 years old	16,639	14,963	−10	13,087	−13
18 years old	3,976	4,188	5	3,199	−24
18–24 years old	26,076	30,367	16	24,881	−18
25–34 years old	27,623	39,481	43	42,548	8
35–44 years old	22,859	28,144	23	39,704	41
Public school districts	17.0	15.9[3]	6	--	--
Operating	16.5	15.6	5	--	--
Nonoperating	.4	.3	−25	--	--
Enrollment:					
Elementary and secondary:					
K–grade 12	50,744	44,743	−12	46,378	4
K–8	35,531	30,843	−13	34,125	11
9–12	15,213	13,901	−9	12,253	−12
Public	45,744	39,643	−13	41,078	4
K–8	31,831	27,143	−15	30,025	11
9–12	13,913	12,501	−10	11,053	−12
Private[4]	5,000	5,100	2	5,300	4
K–8	3,700	3,700	0	4,100	11
9–12	1,300	1,400	8	1,200	−14
Higher education:					
Total	9,215	12,426	35	11,810	−5
Public	7,071	9,696	37	9,284	−4
Private	2,144	2,730	27	2,526	−7
Men	5,239	6,031	15	5,715	−5
Women	3,976	6,394	61	6,095	−5
Under 25 years old	6,401	7,580	18	6,063	−20
25 years old and over	2,814	4,846	72	5,748	19
Full-time	6,072	7,221	19	6,152	−15
Part-time	3,142	5,205	66	5,658	9
Undergraduate	7,941	10,825	36	10,096	−7
Graduate	1,066	1,323	24	1,422	7
First-professional	207	278	34	292	5
Full-time equivalent	7,254	9,092	25	8,165	−10

Source: National Center for Education Statistics.

Characteristic	1972–73	1982–83	% of Change 1972–73 to 1982–83	1992–93[1] (Projected)	% of Change 1982–83 to 1992–93
Elementary and secondary classroom teachers	2,334	2,401	3	2,624	9
Elementary	1,294	1,362	5	1,618	19
Secondary	1,040	1,039	0	1,006	−3
Public	2,103	2,110	0	2,299	9
Elementary	1,140	1,165	2	1,379	18
Secondary	963	945	−2	920	−3
Private[4]	231	291	26	325	12
Elementary	154	197	28	239	21
Secondary	77	94	22	86	−8
Higher education: Senior instructional staff	500	721	44	648	−10
[5]	3,036	2,916	−4	2,378	−18
Public	2,730	2,626	−4	2,142	−18
Private	306	290	−5	236	−19
Boys	1,500	1,451	−3	1,187	−18
Girls	1,536	1,465	−5	1,191	−19
[5]					
Bachelor's	922	970	5	900	−7
Men	518	480	−7	449	−6
Women	404	490	21	451	−8
First-professional	50	72	44	68	−6
Men	46	52	13	45	−13
Women	4	21	425	23	10
Master's	263	295	12	285	−3
Men	154	143	−7	135	−6
Women	109	152	39	150	−1
Doctor's	35	33	−6	34	3
Men	29	22	−24	18	−18
Women	6	11	83	16	45

Characteristic	Constant 1981–82 Dollars 1972–73	1975–76	1978–79	1981–82
	(Billions of Dollars)			
Current expenditures of public elementary and secondary schools[6]	101.6	106.2	109.2	101.0
	(Dollars)			
Current expenditure per pupil in average daily attendance in public elementary and secondary schools	2,368	2,560	2,781	2,724
	(Billions of Dollars)			
Current funds expenditures of institutions of higher education[7]	60.0	64.3	68.0	69.0
Public	38.9	43.3	45.2	45.4
Private	21.1	21.0	22.8	23.6

-- = Not applicable

[1]Intermediate alternative projections are based on assumptions and methodology shown in *Projections of Education Statistics to 1992–93*, forthcoming. Users should check the acceptability of these assumptions for their purposes.

[2]Population projections are middle series projections from the Bureau of the Census.

[3]Preliminary.

[4]Estimated.

[5]Projected in 1982–83.

[6]Excludes capital outlay and interest.

[7]Excludes mandatory transfers from current funds.

NOTE: Conversion to 1981–82 dollars was done on the basis of the Consumer Price Index. Because of rounding, details may not add to totals.

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